



OPIS PREDMETA / SUBJECT SPECIFICATION

<b>Predmet:</b> <b>Subject Title:</b>	Speleobiologija  Speleobiology
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Študijski program Study programme	Študijska smer Study field	Letnik Year	Semester Semester
Izobraževalna biologija / Educational Biology		2 ali 3	Zimski ali poletni

Univerzitetna koda predmeta / University subject code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Lab. work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
15	-	-		15	150	6

Nosilec predmeta / Lecturer:

Jeziki / Predavanja / Lecture:   
Languages: Vaje / Tutorial:

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Prerequisites:

Ni pogojev

No prerequisites

Vsebina:

Contents (Syllabus outline):

- Uvod v speleobiologijo
- Jame, špranje, umetni rovi, podzemeljsko površinsko okolje, tla
- Izviri, intersticialno okolje, hipotelminoreik, jezerske in morske globine, morske jame
- Troglomorfoze: velikost trupa in okončin, anoftalmija, depigmentiranost, apterizem, fizogastrija, psevdofizogastrija
- Troglobionti, troglofili, troglokseni; freatobionti; stigobionti
- Pregled organizmov v podzemlju: prokarioti; glive; rastline; živali
- Porifera, Protozoa, Cnidaria, Turbellaria, Nemertea, Nematoda, Mollusca, Polychaeta, Oligochaeta, Hirudinea, Chelicerata, Crustacea, Myriapoda, Insecta, Vertebrata
- Geografska razširjenost podzemeljskih živali
- Fiziologija in etologija podzemeljskih živali
- Evolucija podzemeljskih živali
- Slovenija kot država z največjo diverzitetno podzemeljskih taksonov v svetovnem merilu
- Pregled najvažnejših podzemeljskih živali

- Introduction into speleobiology
- Caves, fissures, artificial tunnels, superficial hypogean environment, soils
- Springs, interstitial environment, hypotelminoreic environment, deep lake and deep sea regions, marine caves
- Troglomorphoses: body and appendages size, anophthalmia, apterism, physogastry, pseudophysogastry
- Troglobionts, troglaphiles, troglonexes; freatobionts; stygobionts
- Review of organisms in the hypogean environments: Procaryota, Fungi, Plants, Animals
- Porifera, Protozoa, Cnidaria, Turbellaria, Nemertea, Nematoda, Mollusca, Polychaeta, Oligochaeta, Hirudinea, Chelicerata, Crustacea, Myriapoda, Insecta, Vertebrata
- Geographical distribution of the hypogean organisms
- Physiology and ethology of the hypogean organisms
- Evolution of the hypogean organisms
- Slovenija as the state with the highest diversity of the hypogean organisms in the World
- Review of the most prominent hypogean animals

Temeljni študijski viri / Textbooks:

- Chapman, P., 1993: Caves and cave life. Harper Collins, London.
- Culver, D. C., W. B. White (eds.), 2005: Encyclopedia of caves. Elsevier/Academic Press, Amsterdam/Boston.
- Gunn, J., 2004: Encyclopedia of caves and karst science. Taylor & Francis Books Inc., New York/London.
- Juberthie, C. & V. Decu (eds.), 1992-1996: Encyclopaedia biospeologica I-III. Societ  de biosp ologie, Moulis, Bukarest.
- Pipan, T., 2005: Epikarst – a promising habitat. Carsologica, Zalo ba ZRC, Ljubljana.
- Sket B., Paragamian K., Trontelj P., 2004. A census of the obligate subterranean fauna of the Balkan peninsula. In: Griffiths H. I., B. Kry tufek (eds.): Balkan Biodiversity. Pattern and Process in Europe's Biodiversity Hotspot. Kluwer Academic Publishers: 309-322.

**Cilji:**

- Podati pregled tipov in značilnosti podzemeljskih habitatov
- Podati pregled tipov in značilnosti podzemeljskih organizmov
- Predstaviti poseben status Slovenije glede diverzitete podzemeljskih taksonov

**Objectives:**

- To give an overview of typology and characteristics of hypogean habitats
- To give an overview of typology and characteristics of hypogean organisms
- To present the prominent position of Slovenia as for the diversity of the hypogean taxa

**Predvideni študijski rezultati:**

- Znanje in razumevanje:
- Ekološke značilnosti podzemeljskih habitatov
  - Biotske značilnosti podzemeljskih organizmov
  - Zgodovina speleobiologije in trendi modernih znanstvenih raziskav
  - Poznavanje osnovnih vzor evalnih metod v podzemeljskih habitatih
- Prenesljive/klju ne spretnosti in drugi atributi:
- Prepoznavanje troglomorfov in troglomorfoznih organizmov
  - Usposobljenost za biolo ko raziskovalno delo v podzemeljskih votlinah

**Intended learning outcomes:**

- Knowledge and Understanding:
- Ecological characteristics of hypogean habitats
  - Biotic characteristics of hypogean organisms
  - The history of speleobiology and modern trends of scientific investigations
  - Knowledge about the elementary sampling methods in hypogean habitats
- Transferable/Key Skills and other attributes:
- Recognition of troglomorphoses and troglomorphic organisms
  - Capability of biological investigations in cavities

**Metode pou evanja in u enja:**

- Predavanja
- Laboratorijske vaje
- Terenske vaje
- Individulano na rtovanje izbrane raziskave

**Learning and teaching methods:**

- Lectures
- Laboratory excersises
- Field excersises
- Individual planning of a selected investigation

**Na ini ocenjevanja:**

- Seminarska naloga
- Pisni izpit

Dele  (v %) /  
Weight (in %)

20  
80

**Assessment:**

- Seminar essay
- Written examination

**Materialni pogoji za izvedbo predmeta :**

- *Multimedijska predavalnica*
- *Laboratorij z mikroskopi, binokularnimi lupami in kemijskim instrumentarijem*
- *Ekскурzije na teren*

**Material conditions for subject realization**

- *Lecture hall for multimedia presentations*
- *Laboratory with microscopes, binocular lenses and chemical instruments*
- *Field excursions*

**Obveznosti študentov:**

- (pisni, ustni izpit, naloge, projekti)*
- Seminarska naloga
  - Pisni izpit

**Students' commitments:**

- (written, oral examination, coursework, projects):*
- Seminar essay
  - Written examination